

Pain Neuroscience Education as an Occupational Therapy Intervention

Christine Davis, OTR/L



INTRODUCTION

Fibromyalgia is a complex chronic condition characterized by chronic widespread pain, which affects 2-8% of the general population (Cohen, 2017). It is a condition involving central and peripheral mechanisms and can be difficult to diagnose and treat creating fear within the client and a lack of understanding of their symptoms. Pain Neuroscience Education (PNE) is an educational strategy used help clients understand their symptoms and take an active self-management approach. According to Louw, Zimney, Puentedura, & Diener, 2016, PNE has been shown to decrease pain, improve patient knowledge of pain, improve function and lowering disability, reduce psychosocial factors, enhance movement, minimize healthcare utilization. The objective of this project was to understand if PNE may be a useful educational strategy in occupational therapy practice for persons with fibromyalgia.

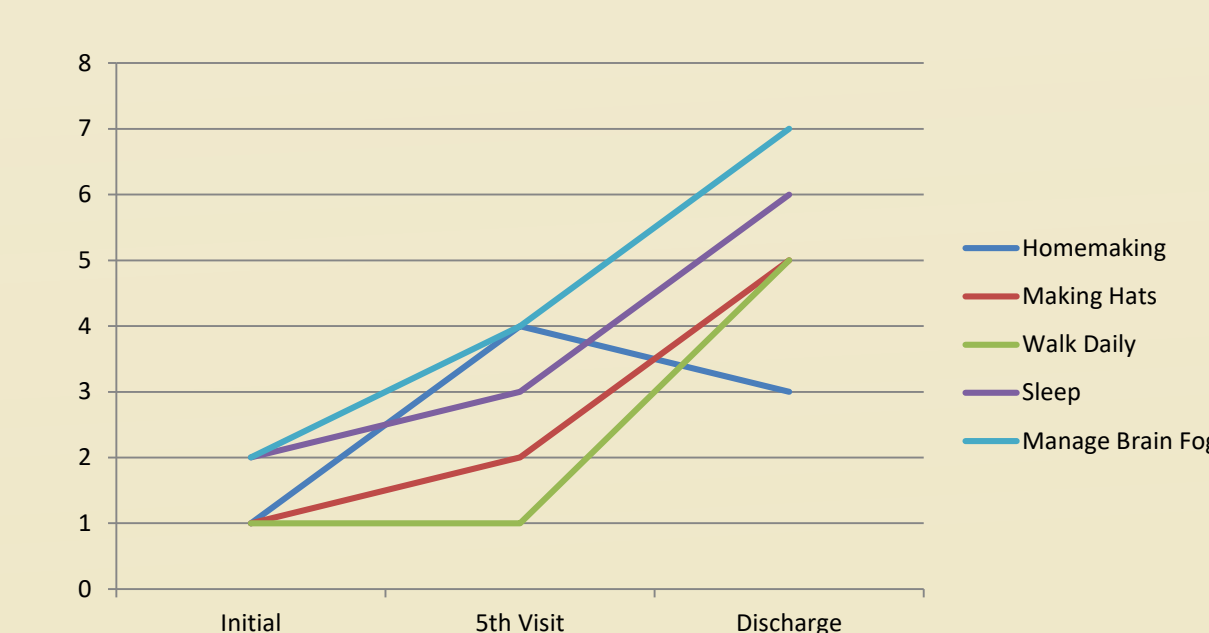
METHODS

The client highlighted in occupational therapy intervention for fibromyalgia is a 45-year-old female who participated in occupational therapy evaluation and intervention over the course of five months for a total of nine visits. The client participated in PNE in conjunction with other interventions. PNE allows the person to understand how their pain works in order to cope and implement a needed self-management strategy to decrease the severity of their symptoms. PNE is delivered through storytelling and metaphors. Catastrophizing correlates with disability (and reconceptualizing pain may decrease catastrophizing (Gallagher, McAuley, & Moseley, (2013) .Client goal achievement was measured using the Canadian Occupational Performance Measure (COPM), the QuickDASH, the Fibromyalgia Impact Questionnaire-Revised (FIQR),.

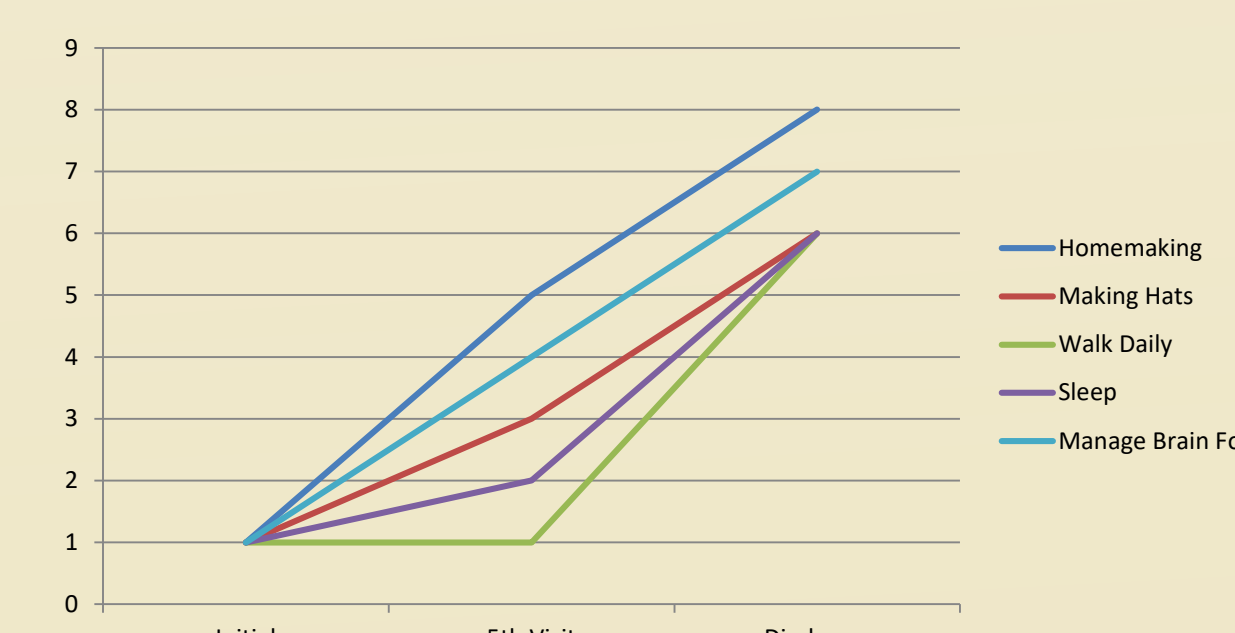
RESULTS

The client reported she had met all her goals in occupational therapy upon discharge and reported “I have the tools to help me feel more in control”. The client’s COPM scores improved by 3.8 in performance and 5.6 in satisfaction. The client’s QuickDASH score improved by 29.25% and the client’s QuickDASH Work Module score improved by 62.5%. The client completed the FIQR during the physician referral visit and about one month after the completion of occupational therapy demonstrating an improved score by 26.5 points. Both the QuickDASH and the FIQR show improvement when scores decline. A lower score on the QuickDASH indicates a lower upper extremity disability rating and a lower score of the FIQR indicates lesser impact of fibromyalgia.

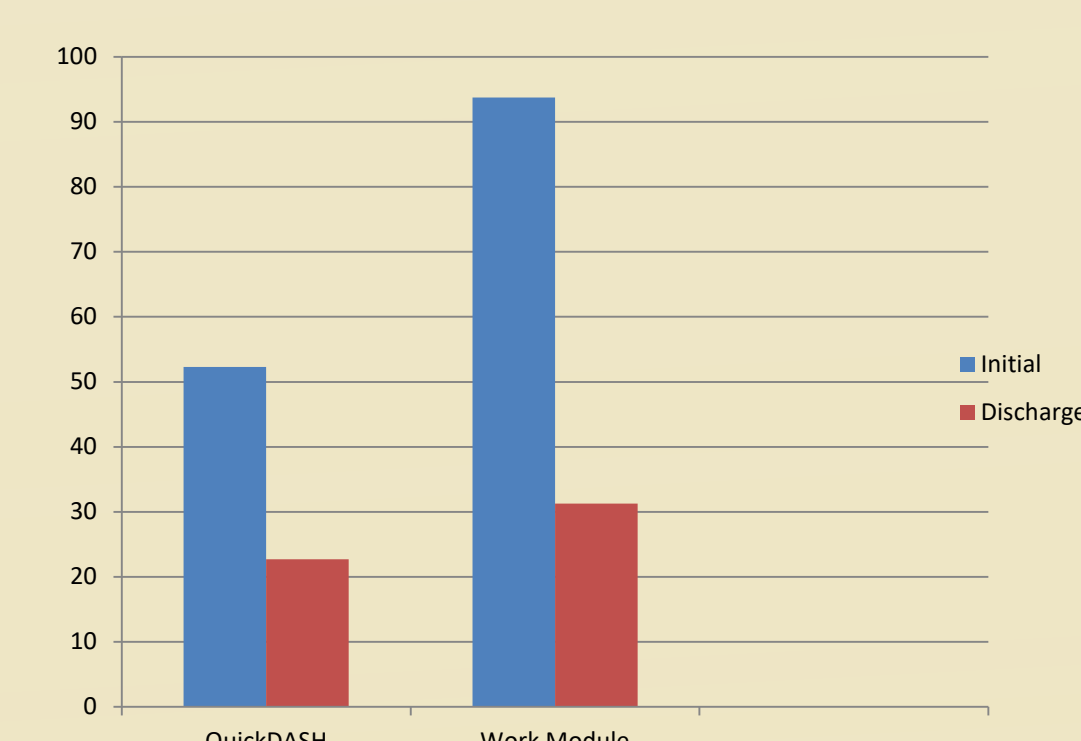
COPM Performance



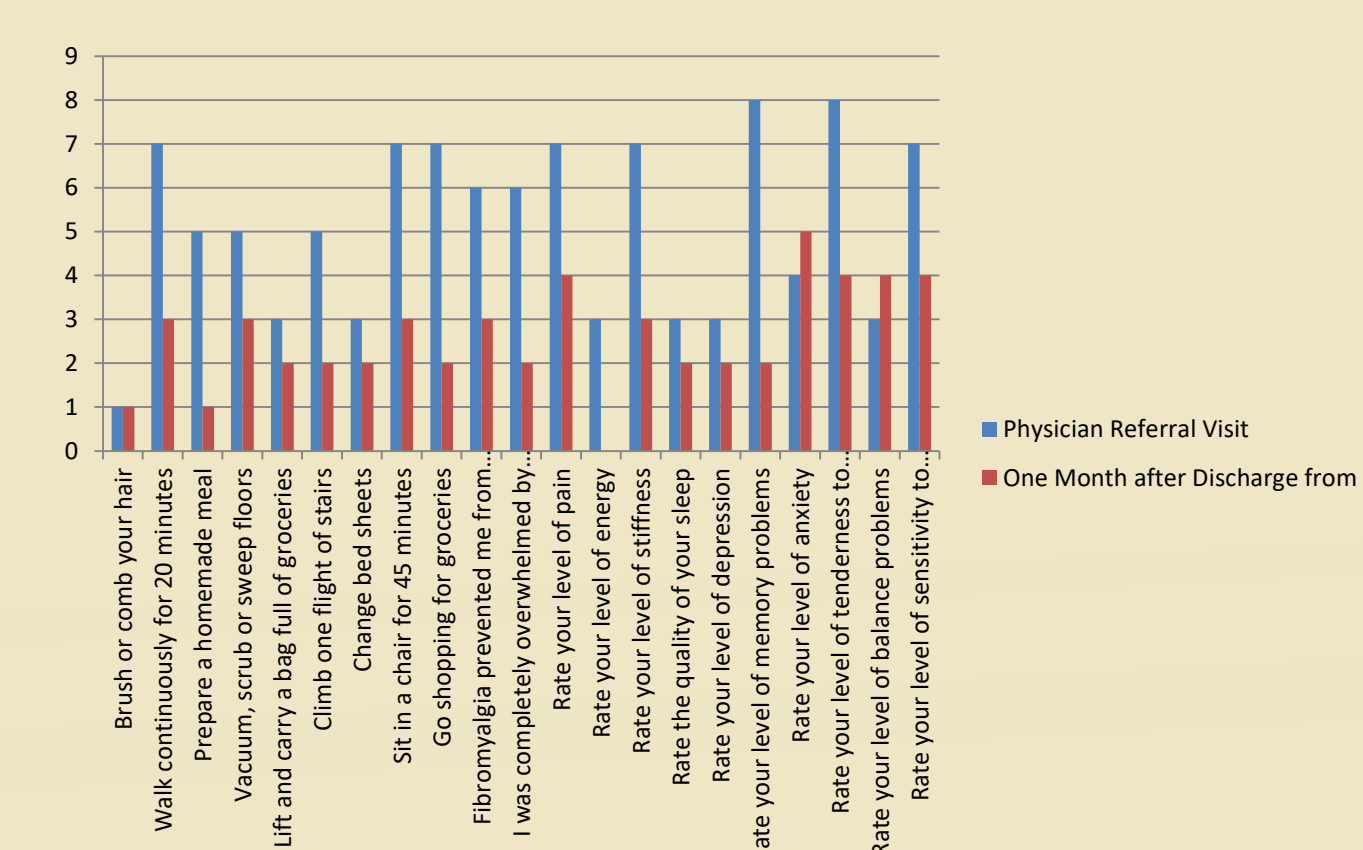
COPM Satisfaction



QuickDASH



FIQR



DISCUSSION

While occupational therapists use multiple education strategies in practice, it may be beneficial to consider PNE as a valid treatment option for persons with fibromyalgia. Geneen et al. (2015), completed a systematic review with meta-analysis looking at the effects different types of education to help adults understand chronic pain and they found PNE was the only education strategy that showed a reduction in the person’s disability rating and decreased catastrophizing by reconceptualizing how a person thinks about their pain. Data from this project indicates Pain Neuroscience Education may be an effective educational strategy used in occupational therapy intervention for persons with fibromyalgia. The client noted significant improvements in function, performance, and overall satisfaction with completion of activities of daily living. The positive results indicate PNE may be an effective educational strategy in occupational therapy practice for persons with fibromyalgia and warrants further consideration in future research projects. Using metaphors and storytelling when educating a person on how pain works may change their beliefs about pain and increase participation in their daily activities.

REFERENCES

Cohen, H. (2017). Controversies and challenges in fibromyalgia: a review and a proposal. *Therapeutic advances in musculoskeletal disease*, 9(5), 115-127. <https://doi.org/10.1177/1759720X17699199>

Gallagher, L., McAuley, J., & Moseley, G. L. (2013). A randomized-controlled trial of using a book of metaphors to reconceptualize pain and decrease catastrophizing in people with chronic pain. *The Clinical journal of pain*, 29(1), 20-25.

Geneen, L. J., Martin, D. J., Adams, N., Clarke, C., Dunbar, M., Jones, D., ... & Smith, B. H. (2015). Effects of education to facilitate knowledge about chronic pain for adults: a systematic review with meta-analysis. *Systematic reviews*, 4(1), 132.

Louw, A., Zimney, K., Puentedura, E. J., & Diener, I. (2016). The efficacy of pain neuroscience education on musculoskeletal pain: a systematic review of the literature. *Physiotherapy theory and practice*, 32(5), 332-355. <https://doi.org/10.1080/09593985.2016.1194646>